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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,769	12/05/2003	Marcus Clark	AAI-14197	3409

7590 08/08/2006

James D. Erickson
Autoliv ASP, Inc.
3350 Airport Road
Ogden, UT 84405

EXAMINER	
KLEIN, GABRIEL J	

ART UNIT	PAPER NUMBER
3641	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/729,769	CLARK ET AL.	
	Examiner	Art Unit	
	Gabriel J. Klein	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) *6* is/are withdrawn from consideration.

5)☒ Claim(s) *21* is/are allowed.

6)☒ Claim(s) *1-11,13-20 and 22-25* is/are rejected.

7)☒ Claim(s) *12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *December 5, 2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claim 6 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 19, 2006.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 5, 17, 18, and 22-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "deformable" in claims 4, 17, and 22 is a relative term which renders the claim indefinite. The term "deformable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Any physical structure is deformable provided it is subjected to enough force. For purposes of examination a "deformable material" will be considered to be any solid material.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 7-11, 13-14, 16-17, and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Neunzert et al (2002/0113420).

In reference to claim 1, Neunzert et al discloses an inflator device including a housing defining a storage chamber (figure 2, element 30); a supply of gas generant material disposed within the storage chamber (figure 2, element 50); and an initiator assembly joined (figure 2, element 60) to the housing and including an initiator (figure 2, element 70) in actuating communication with the supply of gas generant material; and further comprising: a moisture barrier member disposed between the initiator assembly and the supply of gas generant material, wherein the moisture barrier prevents moisture transmission from the initiator assembly to the supply of gas generant material, and wherein upon actuation of the initiator the moisture barrier member ruptures (figure 2, element 54; paragraph [0062]; paragraph [0067]). It should be appreciated that since element 54, as disclosed by Neunzert et al, is capable of sealing the initiator assembly chamber from compressed gas that it is inherently capable of acting as a moisture barrier as well.

In reference to claim 3, Neunzert et al discloses that the moisture barrier member prevents direct contact of the supply of gas generant material with the initiator when the inflator device is in a static state prior to actuation of the initiator (paragraph [0062]).

In reference to claim 4, Neunzert et al discloses that the moisture barrier member comprises a deformable material (paragraph [0067]).

In reference to claim 7, Neunzert et al discloses that the moisture barrier member is non-planar (paragraph [0062]).

In reference to claim 8, Neunzert et al discloses that the non-planar moisture barrier member includes a first surface facing the initiator assembly, an opposed second surface facing the supply of gas generant material and an outer edge and wherein the moisture barrier member additionally includes a sleeve portion extending from the moisture barrier member outer edge (figure 2, element 54; the sleeve portion being the being the portion that abuts the annular shelf, element 46).

In reference to claim 9, Neunzert et al discloses that the non-planar moisture barrier member is an integrally molded one piece member (figure 2, element 54; paragraph [0067]).

In reference to claim 10, Neunzert et al discloses that the non-planar moisture barrier member also includes a base portion (figure 2, element 54; the base portion being the middle section from which the sleeve portion extends) and a cup portion (figure 2, element 54; the cup portion being the left-most portion of element 54) and wherein the non-planar moisture barrier member is disposed adjacent the initiator assembly with the cup portion in covering relation with at least a portion of the initiator (figure 2, left-most portion of element 54 and element 70).

In reference to claim 11, Neunzert et al discloses that the non-planar moisture barrier member is an integrally molded one piece member (figure 2, element 54; paragraph [0067]).

In reference to claim 13, Neunzert et al discloses that the non-planar moisture barrier member includes a base portion (figure 2, element 54; the base portion being the middle section from which the sleeve portion extends) and a cup portion (figure 2,

element 54; the cup portion being the left-most portion of element 54) and wherein the non-planar moisture barrier member is disposed adjacent the initiator assembly with the cup portion in covering relation with at least a portion of the initiator (figure 2, left-most portion of element 54 and element 70).

In reference to claim 14, Neunzert et al discloses that the non-planar moisture barrier member is an integrally molded one piece member (figure 2, element 54; paragraph [0067]).

In reference to claim 16, Neunzert et al discloses an inflator device comprising:

- a housing defining a chamber having an inner surface (figure 2, element 30);
- a supply of gas generant material disposed within the storage chamber (figure 2, element 50);
- an initiator assembly (figure 2, element 60) joined to the housing, the initiator assembly including an initiator (figure 2, element 70) in actuating communication with the supply of gas generant material; and
- a non-planar moisture barrier member disposed between the initiator assembly and the supply of gas generant material (figure 2, element 54; paragraph [0062]; paragraph [0067]), the non-planer moisture barrier member including:
    - a base portion (figure 2, element 54; the base portion being the middle section from which the sleeve extends) having a first surface facing the initiator assembly and a second surface on a side opposite the first surface and facing the supply of gas generant material;

- an outer edge adjacent the storage chamber inner surface (figure 2, element 54; where the sleeve and base portion come together);
- a sleeve extending from the moisture barrier member outer edge (figure 2, element 54; the sleeve being the portion that abuts the annular shelf, element 46); and
- a cup portion from the base portion second surface, wherein the non-planar moisture barrier member is disposed adjacent the initiator assembly with the cup portion in covering relation with at least a portion of the initiator (figure 2, left-most portion of element 54 and element 70);
- wherein the non-planar moisture barrier member prevents moisture transmission from the initiator assembly to the supply of gas generant material, and wherein upon actuation of the initiator the non-planar moisture barrier member ruptures (figure 2, element 54; paragraph [0062]; paragraph [0067]). It should be appreciated that since element 54, as disclosed by Neunzert et al, is capable of sealing the initiator assembly chamber from compressed gas that it is inherently capable of acting as a moisture barrier as well.

In reference to claim 17, Neunzert et al discloses that the moisture barrier member comprises a deformable material (paragraph [0067]).

In reference to claim 19, Neunzert et al discloses that the moisture barrier member prevents direct contact of the supply of gas generant material with the initiator

when the inflator device is in a static state prior to actuation of the initiator (paragraph [0062]).

In reference to claim 20, Neunzert et al discloses that the non-planar moisture barrier member is an integrally molded one piece member (figure 2, element 54; paragraph [0067]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neunzert et al in view of Larsen et al (2003/0155757).

Neunzert et al discloses the claimed invention except for wherein the supply of gas generant material comprises a plurality of gas generant material bodies having a form selected from a group consisting of tablets, wafers, extrudlets and combinations thereof, and wherein the gas generant material is coated with an igniter material. Larsen et al teaches that it is known to use a plurality of gas generant material bodies having a tablet form that are coated with an igniter material as set forth in paragraph [0013] to provide an easily ignitable solid gas generant material for an inflator device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the gas generant material as disclosed by Neunzert et al with the coated tablet gas generant as taught by Larsen et al, since Neunzert et al discloses that

solid gas generant material is an optional gas generant material for use with the inflator device disclosed (paragraph [0058]), and since such a modification would constitute a mere exchange of gas generant materials in an analogous art setting, and since the coated tablets taught by Larsen et al would provide easily ignitable gas generant material so as to ensure ignition.

Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neunzert et al.

Neunzert et al discloses the claimed invention but remains silent to all the possible materials that the moisture barrier member may be constructed from. However, Neunzert does disclose that the moisture barrier member may have a material and thickness selected to form a gas tight seal while still permitting said moisture barrier member to rupture upon deployment of the initiator. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the moisture barrier member out of ethylene propylene rubber, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Further, Neunzert et al discloses the claimed invention but does not disclose expressly that the moisture barrier member is made out of ethylene propylene rubber. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the inflator device as taught by Neunzert et al with a moisture barrier member made out of ethylene propylene rubber, because Applicant has not disclosed

that making the moisture barrier member out of ethylene propylene rubber provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a moisture barrier member made out of another material known in the art, such as a thin sheet of steel, as taught by Neunzert et al, because it provides a gas and liquid tight seal that is rupturable upon firing of an initiator and since it appears to be an arbitrary design consideration which fails to patentably distinguish over Neunzert et al. Therefore, it would have been an obvious matter of design choice to modify Neunzert et al to obtain the invention as specified in the claims.

Allowable Subject Matter

Claim 21 is allowed.

Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 22-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriel J. Klein whose telephone number is 571-272-8229. The examiner can normally be reached on Monday through Friday 7:15 am to 3:45 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GJK

MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER